Science Flight Report
Operation IceBridge Arctic 2012

Flight: **Falcon 10, 11**
Mission: **Southeast Grid-2 (land ice)**

Flight Report Summary

Aircraft	**Falcon (HU-25) N525**
Flight Number	Falcon 07
Flight Log number	12F001
Date	Monday, May 7, 2012 (Z)
Purpose of Flight	Flight to southern Greenland with refuel at Narsarsuaq to survey ICESat lines.
Take off time	1020 Zulu at Kangerlussuaq (with refuel at Narsarsuaq airport)
Landing time	1815 Zulu at Kangerlussuaq
Flight Hours	First leg, 3.7 hrs; second leg 3.2 hrs, total 6.9 hrs
Aircraft Status	Airworthy.
Sensor Status	All installed sensors operational.
Significant Issues	Heavy fog in fjord valleys
Accomplishments	• Flew repeat lines over a variety of ATM lines and over one ICESat track.
Geographic Keywords	Southern Greenland
Satellite Tracks	ICESat track #412
Repeat Mission	repeated parts of ATM lines taken in 2010, 2011

Science Data Report Summary

Instrument	Data Volume			Instrument Issues
	Survey Area	Entire Flight		
LVIS	☑	☒	60 GB	None
LVIS cameras	☑	☒	77 GB	None

Mission Report (Seelye Martin, Acting Project Manager)

Flew to southeast Greenland to survey a variety of lines. Weather showed that with the exception of coastal fog and clouds on our transit out, this region of southern Greenland was the only clear area on the continent. As shown on the figure, one ICESat line and a variety of ATM lines were reflown. On the return from the lines, we flew a flow line, which is a line given to us by the Ice Sheet Team, which follows a glacial flow line.
The distances flown for each case was as follows:
ICESat track #412 = 204 km
ATM tracks = 2,324 km
New LVIS track = 400 km
Flow line track = 300 km
Total track (including turns and transit) = 4,574 km.

Total distance flown was 2,686 km. Preliminary examination of the camera and LVIS data shows that the instruments worked well.

Individual instrument reports from experimenters on board the aircraft:

LVIS: The LVIS system worked well and collected data for all of the flight.

LVIS-cameras: worked well.

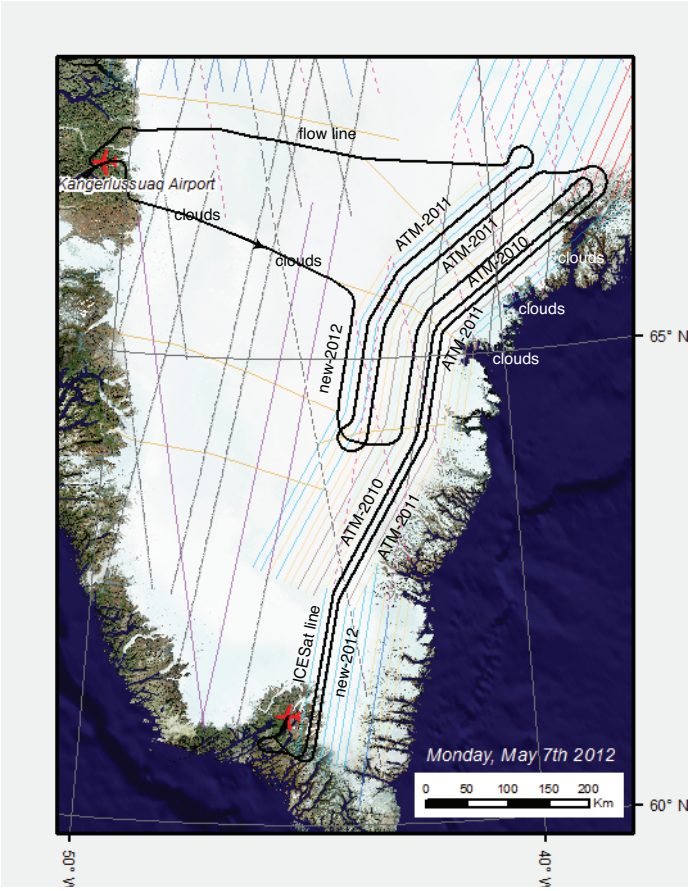

Figure 1: Figure showing trajectory for Southeast Grid-2 flight. See text for more information.